What is claimed is:

1. A ball nose end mill insert for removable affixation to a tool body having a centerline of rotation, the insert comprising:

an insert body having a contact surface for mating engagement with a mounting surface of the tool body;

the insert body including a curved cutting face surface extending between an axially leading tip cutting face surface and an axially trailing side cutting face surface substantially spaced from the centerline of rotation, the insert body including a curved land surface extending between a tip land surface and a side land surface substantially perpendicular to the tip land surface, an intersection of the curved cutting face surface and the curved land surface forming a curved cutting edge; and

a plurality of face serrations formed along the curved cutting face surface, the face serrations having face crests each raised from the contact surface a distance greater than a spacing between an adjacent face root and the contact surface, each face crest having a face crest centerline and each face root having a face root centerline, the plurality of face serrations forming a serrated curved cutting edge.

2. A ball nose end mill insert as defined in Claim 1, wherein the face crests and the face roots each lie substantially within a respective crest plane and root plane.

3. A ball nose end mill as defined in Claim 2, wherein each of the crest plane and the root plane are substantially parallel to the centerline of rotation.

4. A ball nose end mill insert as defined in Claim 1, wherein the curved cutting face surface comprises:

a first cutting face surface lying within a first plane and positioned on one side of the centerline of rotation of the tool body and a second cutting face surface

lying within a second plane substantially parallel to the first plane and positioned on an opposed side of the centerline of rotation of the tool body.

5. A ball nose end mill insert as defined in Claim 1, wherein the plurality of face serrations have substantially identical sinusoidal-shaped crest and root profiles.

6. A ball nose end mill insert as defined in Claim 1, further comprising:

a side cutting edge formed by the side cutting face surface and the side land surface, the side cutting edge being parallel to the centerline of rotation, and including another plurality of serrations formed along the side cutting face surface forming a serrated side cutting edge.

7. A ball nose end mill insert as defined in Claim 1, wherein each of the crest centerlines and the root centerlines are generally perpendicular to a respective intersection of the respective centerline and a tangent to the curved cutting edge.

8. A ball nose end mill insert as defined in Claim 1, wherein the insert body is formed from a carbide material.

9. A ball nose end mill insert as defined in Claim 1, further comprising:

a mounting opening extending through the insert body for receiving an attachment mechanism for securing the insert body to the mounting surface of the tool body.

10. A ball nose end mill insert as defined in Claim 1, where in the insert body contact surface includes a plurality of grooves for mating engagement with corresponding grooves on the mounting surface of the tool body.

11. A ball nose end mill insert as defined in Claim 1, wherein each of the plurality of face crests on a first cutting face on a first side of the centerline of rotation is positioned at a respective axial position along the centerline of rotation, and a corresponding face root is positioned at each respective axial position along the centerline of rotation on a second cutting face on a second side of the centerline of rotation.

12. A ball nose end mill having one or more removable cutter inserts, comprising:

an axially extending tool body having a centerline of rotation;

a tool mounting surface on the tool body for removably securing an insert body to the tool body;

the insert body having a contact surface for mating engagement with a mounting surface of the tool body, the insert body including a curved cutting face surface extending between an axially leading tip cutting face surface and an axially trailing side cutting face surface substantially spaced from the centerline of rotation, the insert body including a curved land surface extending between a tip land surface and a side land surface substantially perpendicular to the tip land surface, an intersection of the curved cutting face surface and the curved land surface forming a curved cutting edge; and

a plurality of face serrations formed along the curved cutting face surface, the face serrations having face crests each raised from the contact surface a distance greater than a spacing between an adjacent face root and the contact surface, each face crest having a face crest centerline and each face root having a face root centerline, the plurality of face serrations forming a serrated curved cutting edge.

13. A ball nose end mill insert as defined in Claim 12, wherein the face crests and the face roots each lie substantially within a respective crest plane and root plane.

14. A ball nose end mill as defined in Claim 13, wherein each of the crest plane and the root plane are substantially parallel to the centerline of rotation.

15. A ball nose end mill as defined in Claim 12, wherein the curved face surface comprises:

a first cutting face surface lying within a first plane and positioned on one side of the centerline of rotation of the tool body and a second cutting face surface lying within a second plane substantially parallel to the first plane and positioned on an opposed side of the centerline of rotation of the tool body.

16. A ball nose end mill as defined in Claim 12, wherein the plurality of face serrations have substantially identical sinusoidal-shaped crest and root profiles.

17. A ball nose end mill as defined in Claim 12, further comprising:

a mounting opening extending through the insert body for receiving an attachment mechanism for securing the insert body to the mounting surface of the tool body.

18. A ball nose end mill as defined in Claim 12, where in the insert body contact surface includes a plurality of grooves for mating engagement with corresponding grooves on the mounting surface of the tool body.

19. A ball nose end mill insert for removable affixation to a tool body having a centerline of rotation, the insert comprising:

an insert body having a contact surface for mating engagement with a mounting surface of the tool body;

the insert body including a curved cutting face surface extending between an axially leading tip cutting face surface and an axially trailing side cutting face surface substantially spaced from the centerline of rotation, the insert body including a curved land surface adjacent the curved cutting face surface and extending between a tip land surface and a side land surface substantially perpendicular to the tip land surface, an intersection of the curved cutting face surface and the curved land surface forming a curved cutting edge; and

a plurality of face serrations formed along the curved cutting face surface, the face serrations having face crests each raised from the contact surface a distance greater than a spacing between an adjacent face root and the contact surface, each face crest having a face crest centerline and each face root having a face root centerline, the plurality of face serrations forming a serrated curved cutting edge, and the face crests and the face roots each lie substantially within a respective crest plane and root plane.

20. A ball nose end mill as defined in Claim 19, wherein each of the crest plane and the root plane are substantially parallel to the centerline of rotation.

21. A ball nose end mill as defined in Claim 19, wherein the curved face surface comprises:

a first cutting face surface lying within a first plane and positioned on one side of the centerline of rotation of the tool body and a second cutting face surface lying within a second plane substantially parallel to the first plane and positioned on an opposed side of the centerline of rotation of the tool body.

22. A ball nose end mill as defined in Claim 19, wherein the plurality of face serrations have substantially identical sinusoidal-shaped crest and root profiles.